

STUDIES IN ACARINA II

H. V. M. HALL
POMONA COLLEGE, CLAREMONT, CALIFORNIA

Notaspis nuda, n. sp.

(Figure 211)

Length 527 microm. Black, smooth and polished. Abdomen longer than broad, ovate without wings. Mandible chelate. Lamellæ blades on edge, horizontal, running from pseudostigmata sp. two-thirds of way to tip of rostrum. No cusps of lamella, the lamellæ tapering anteriorly so that the lamellar hairs arise

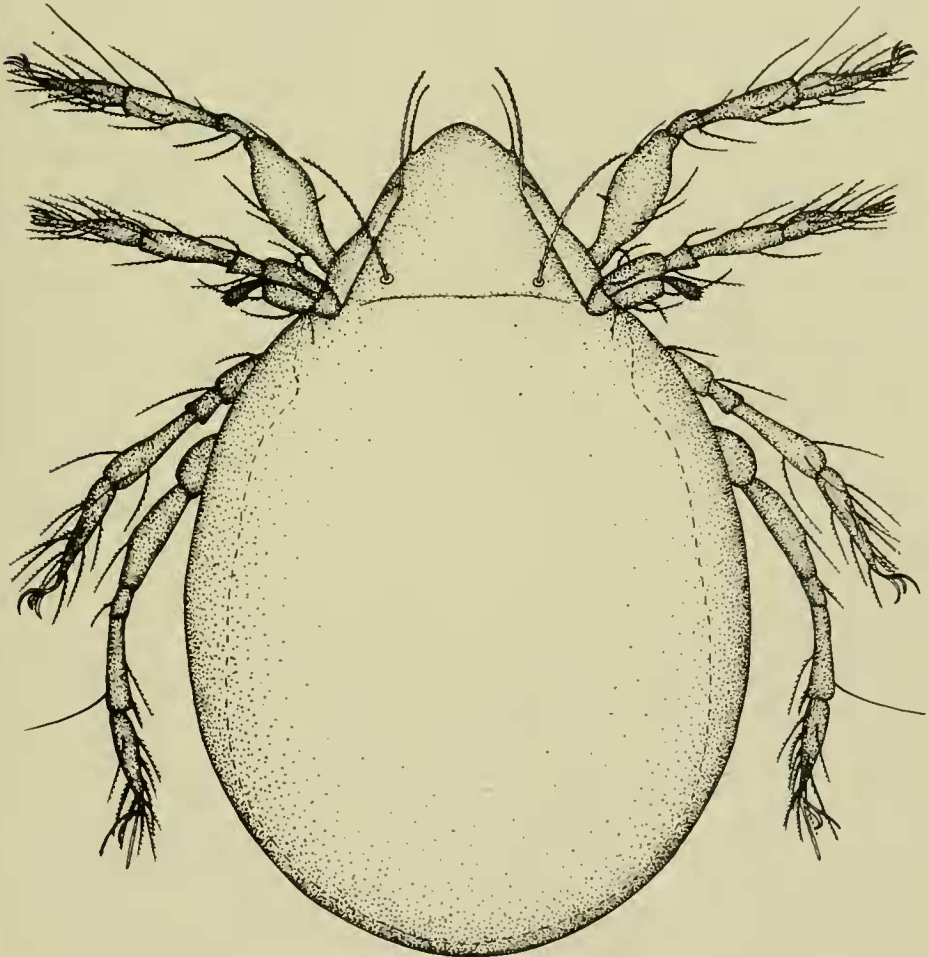


Figure 211. *Notaspis nuda*

from the front end of their basal line. Lamellar hairs, interlamellar hairs and rostral hairs all pectinate; the rostral hairs arising from apophyses. Rostrum rounded. No translamella. Pseudostigmatic organ with rather long stem and gradually clavate head bearing a few short spines on distal end. Femora of anterior pairs of legs swollen but without apparent blades. Legs a little more than half the length of body, moderately set with long, fine, pectinate hairs; a longer simple bristle projecting from distal end of penultimate joint. Unguis tridactyle. Abdomen hairless.

Differs from *N. microptera* (Berl.) in having a rounded rostrum, lamellæ tapering anteriorly instead of widest anteriorly, no terminal hair on pseudostigmatic organ and abdomen longer than broad. Three specimens under boards Claremont, Cal.

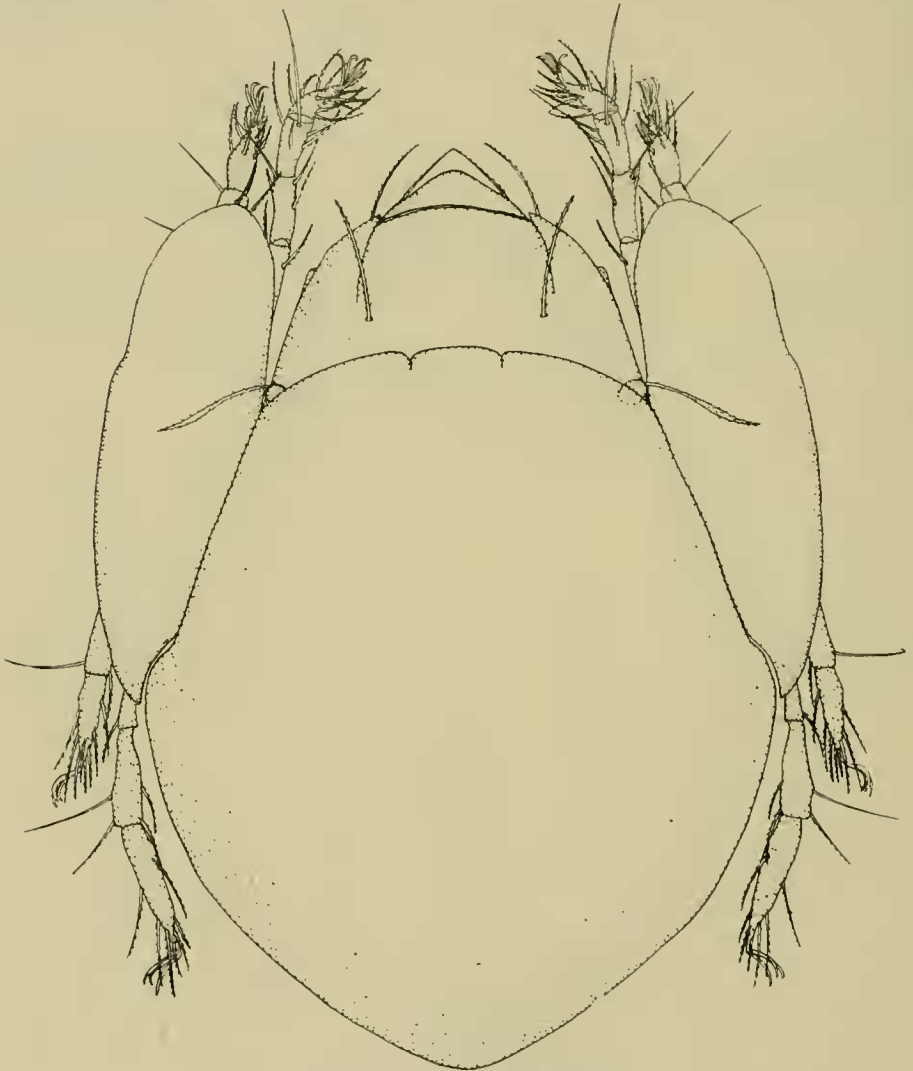


Figure 212. *Oribata humida*

Oribata humida n. sp.

(Figure 212)

Length 596 to 627 micrm. Color chestnut, polished. Abdomen with wings. Mandible chelate. Lamellæ blade-like but attached nearly the whole length bluntly tapering to tip of rudimentary eusps. Lamellar hairs, rostral hairs and interlamellar hairs stout, pectinate. Tectopedium blunt anteriorly. Translamella a mere line running between the lamellæ just back of tips of eusps. Pseudostigmatic organ slender, slightly fusiform, and uniformly pectinate. The suture marking the anterior edge of abdomen with two notches near the median line. Abdomen hairless, almost as broad just behind the wings as long, and roundly pointed posteriorly. Wings extending nearly to rostrum and rounded anteriorly. Legs slender, rather thickly set with hairs, most of them finely pectinate. One simple bristle at distal end of each penultimate joint. Unguis tridactyle. Several specimens under board near hydrant, Laguna Beach.

Key to near relatives of *O. alata*

- | | |
|--|---|
| 1. A distinct suture on dorsum between cephalothorax and abdomen. | 2 |
| No suture on dorsum between cephalothorax and abdomen. | 4 |
| 2. Pseudostigmatic organ short, clavate, length 600 micrm. | <i>O. alata</i> |
| Pseudostigmatic organ with long recurved peduncle and fusiform head. | 3 |
| 3. Dorsum of abdomen with fine longitudinal wrinkles, length 850 micrm. | <i>O. rugifrons</i> |
| Dorsum of abdomen plain. | <i>O. dorsalis</i> |
| 4. Pseudostigmatic organ setiform. | <i>O. setiformis</i> (Hall) |
| Pseudostigmatic organ with long slender peduncle and gradually clavate head. | <i>O. alata</i> var. <i>californica</i> |

Oribata alata var. *californica* n. var.

(Figure 213)

Length 471 micrm. Color black, polished. Abdomen globular, with wings. Mandible chelate. No lamella. Dorsal covering extends forward to rostrum without break. Rostral hairs pectinate. No translamella. Interlamellar hairs not apparent. Pseudostigmatic organ straight with a long, thin peduncle and gradually clavate head which bears a few short spines on the distal end. Abdomen smooth, hairless and almost as broad behind the wings as three-fourths the length of body. Wings project forward almost to tip of rostrum and are rounded anteriorly as shown by the right wing. The other wing shows the normal position and appearance, and as the species are divided on whether the wings are pointed or rounded anteriorly, this instance shows the care which must be taken in determination, even when seemingly definite and non-confusable characters are used. The wings are transversely sculptured. Legs sparsely clothed with pectinate hairs and a long simple bristle projects from the end of penultimate joint of leg one, the two bristles almost meeting in front of rostrum. Unguis heterodactyle, the middle claw being the heaviest and opposed to the others as

shown in the small figure. Legs short and of moderate size. Tarsus tapers at the tip. Two specimens, under boards, Claremont, Cal.

This form differs from *O. alata* (Herm.) by the longer peduncle of the pseudostigmatic organ. In this respect it is more like *O. dorsalis* (Koeh) which as Michael suggests may be a variety of *O. alata*. *O. dorsalis* has not been reported from America and it might be well to consider it and my specimens as varieties of *O. alata*. My specimens differ sharply from the figure of *O. dorsalis* given by Michael in his article on the Oribatidæ in "Das Terreich," 1898, by having no line across the dorsum between cephalothorax and abdomen.

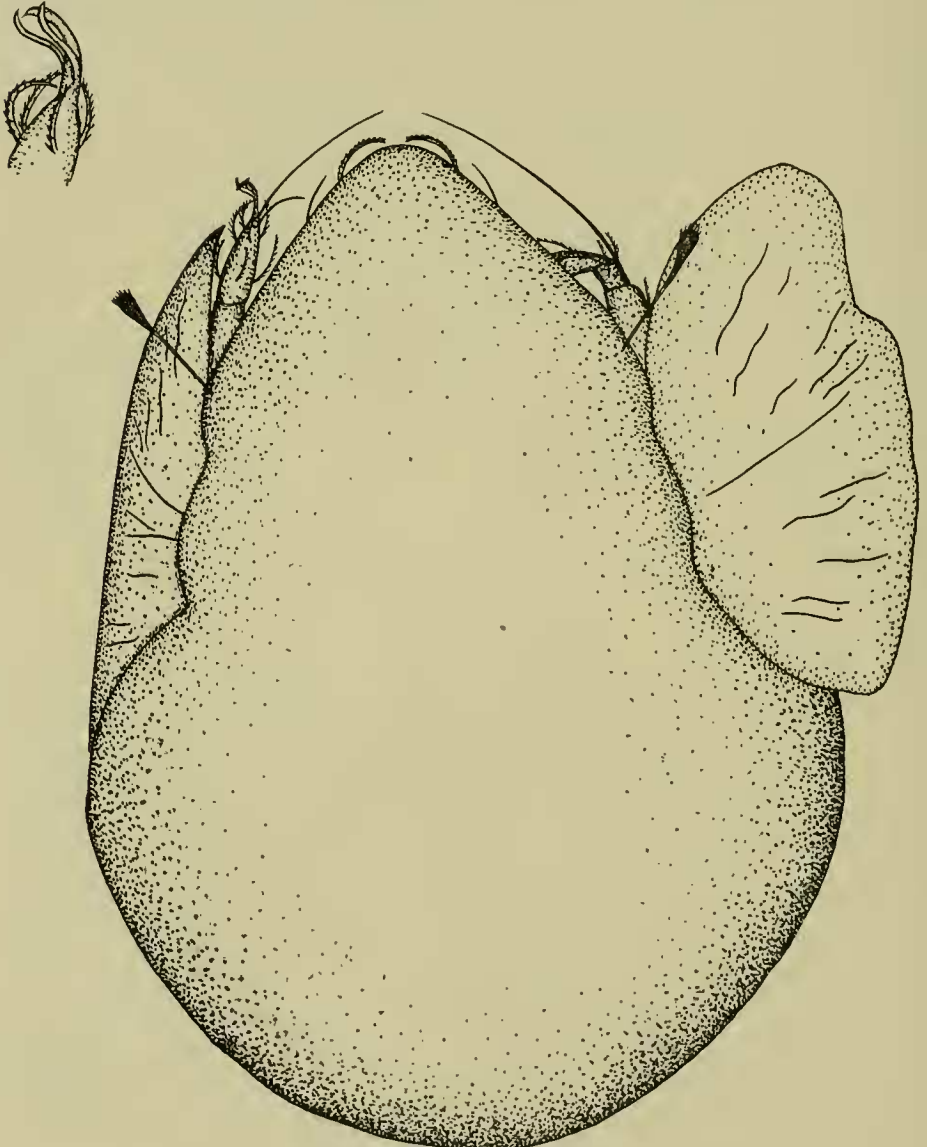


Figure 213. *Oribata alata*, var. *californica*

Lohmannia spinosa n. sp.

(Figure 214)

Length 514 micm. Legs colorless. Body showing black and brown internal organs but integument colorless. Abdomen without wings. Mandibles heavy and chelate. No lamellæ, translamella nor tectopedium. Pseudostigmatic organ with moderately long peduncle and gradually clavate head which is pectinate on distal half. Abdomen viewed dorsally is almost circular in outline with prominent tubercles from which arise long pectinate bristles. Side view seems to agree more easily with the generic feature—"almost cylindrical." The suture separating cephalothorax and abdomen becomes double ventrally. Maxillary palpus more than once and a half times the length of movable arm of chela of mandible. Legs about half the length of body. Unguis monodactyle sp. On each side of cephalothorax are three superior bristles and two lateral bristles similar in size, shape and pectination to those on abdomen. Legs moderately set with fine pectinate hairs; a simple bristle, slightly longer, on the apex of penultimate joint. Under rotting board. Claremont, Cal. One specimen.

Figure 214. *Lohmannia spinosa*

This species being placed in *Lohmannia* necessitates a slight modification of the generic description, i. e., the clause in regard to the relative length of the palpus and the movable arm of chela of mandible must be moved to the specific descriptions of *L. murcioides* and *L. paradoxa*. Since my species fits the generic description so well in other respects, and since the number of species in the genus is so small, I would prefer to make this correction rather than to establish a new genus on such slight characters.

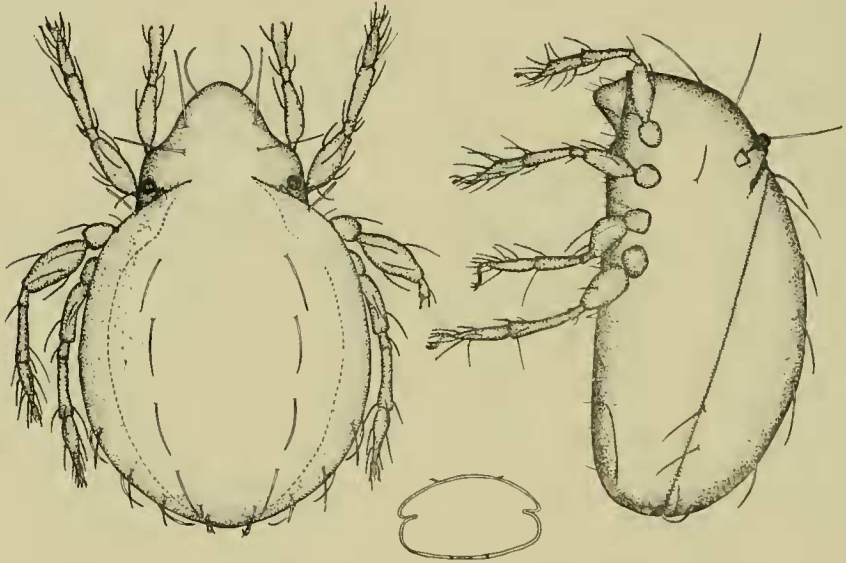
Paraliodes n. g.

Abdomen not segmented, dorsum of abdomen convex, smooth, fully chitinized, not carrying cast nymphal skins. Unguis tridactyle. Genital and anal covers widely separated.

Paraliodes incurvata, n. sp.

(Figure 215)

Length 595 to 720 microm. Color dark brown, almost black. Abdomen without wings. Mandible stout chelate. No lamellae nor tectopedium. Rostral hairs curved, stout and smooth. Lamellar and interlamellar hairs arising from tubercles, straight, stout, smooth and separated but slightly more than rostral hairs. Pseudo-stigmatic organ rather short; with large, gradually clavate, finely pitted head, pointing forward, upward and slightly to the side. Femora swollen, with rudimentary blades. Abdomen broadly ovate with three rows of stout smooth hairs on each side of dorsum, similar to those on the cephalothorax. The first row of hairs are slightly curved and lie about half way from the median line to the margin. The hairs of the sub-marginal row are also only slightly curved, while

Figure 215. *Paraliodes incurvata*

those in the marginal row are strongly bent. The marginal and sub-marginal rows of hairs extend about half as far forward as the other row. On the front, upper portion of the abdomen, almost directly over the angle between cephalothorax and abdomen is a broader hair which is coarsely serrate on the anterior edge. The legs are short, about half the length of the body and moderately set with fine pectinate hairs. A simple, longer hair on distal end of penultimate joint. Unguis tridactyle. A deep re-entrant fold of the integument, shown in side view and by dotted line in dorsal view, marks the suture between dorsal and ventral plates. Many specimens, under boards, Claremont, Cal.

Hermannia hieroglyphica n. sp.

(Figure 216)

Length 371 microm. Color brown with black markings, rough and deeply sculptured. Abdomen without wings. Mandibles chelate; no lamellae, translamella.

lamellar or interlamellar hairs. Rostral hairs simple and similar to hairs on legs. Pseudostigmatic organ with a short peduncle and large spherical head. Three pairs of short simple hairs on posterior margin of abdomen. Dorsum of abdomen with a lateral margin in which the sculpturing is heavier than in the central portion; the two portions separated by a double ridge around the posterior half, which continues as a single ridge around the anterior half of abdomen. While the shape of the sculpturing is unsymmetrical, noticeably so on the cephalothorax.

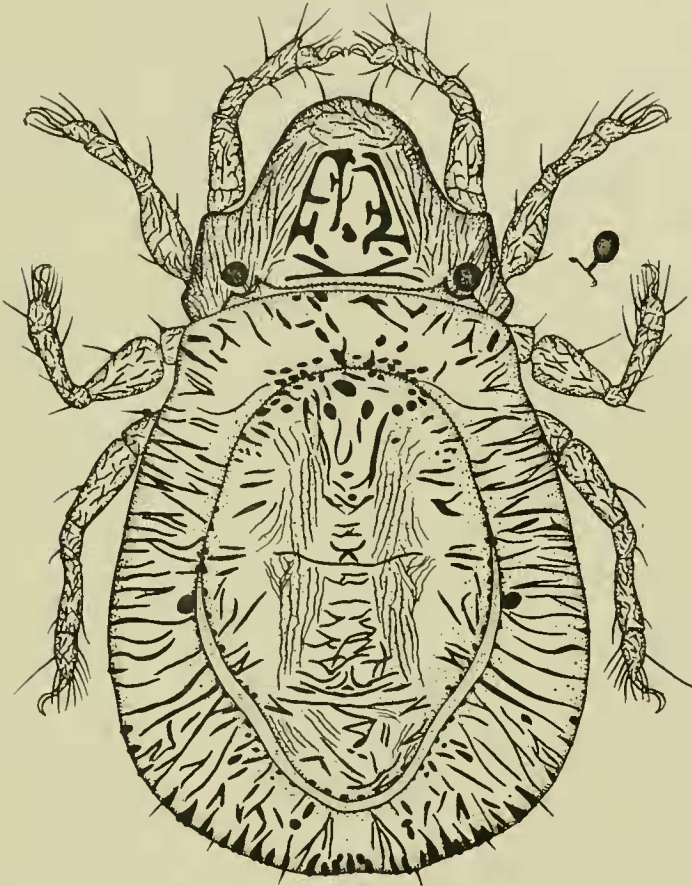


Figure 216. *Hermannia hieroglyphica*

the sculptured areas are symmetrically distributed. The marginal area of the abdomen is crossed by heavy irregular black ridges radiating more or less from the center of the abdomen. On the posterior margin they are thicker and more bead-like. The central area of the abdomen is more irregularly marked, the heaviest markings running across the anterior end of this area and thence scattering down the center and around the lateral and posterior margins of this central area. Finer parallel wrinkles lie latitudinally beside the heavier central mark-

ings. The cephalothorax has a central area of heavy hieroglyphics around which are irregular wrinkles. The legs are also much irregularly wrinkled. There is an unbroken line marking the anterior margin of the abdomen. The tarsi are very short, unguis monodactyle. Several specimens, under black scale (*Saissetia olei*), Claremont, Cal.

Differs from *H. bistrata* (Nic.) in having a very short capitate pseudostigmatic organ, no interlamellar hairs, and no basin-shaped depression in center of posterior margin between the two median ridges nor curved hairs around posterior margin.

$$\begin{array}{r} 648 \\ 384 \\ \hline 264 \\ 7 \\ 16 \\ \hline 287 \end{array}$$